The Builder.

SATURDAY, JANUARY 21, 1854.

BECAUSE the cold weather has stayed the progress of diseases dependent on the want of proper sanitary measures, several parishes have stopped proceedings into which they had been frightened:—

"The devil was sick: the devil a saint would be.
The devil got well: the devil a saint was he."

Earnestly, however, we caution all against being betrayed into negligence. There was the same lull during the winter when England was before visited by the cholera, and there seems too much reason to fear that with the spring the epidemic will return. That we may mitigate it (under higher power), if not escape it altogether, is proved,—proved beyond a doubt; and we ought most sedulously to employ the time before us with that end in view.

The over-crowded condition of the dwellings of the poor, which has been repeatedly referred to by us, continues to demand attention. The moral and physical effects of the present condition of things, the great degradation, ill health, and loss of life, meet us at every turn. Typhus, the disease of filth, has been busy. Those who have been engaged in the relief of some of the London parishes, tell a sad tale of the great expense and loss of life constantly resulting from dirt, ill drainage, and bad air. Not long since a man called on one so engaged, and asked to be assisted with a coffin in which to bury his wife, being too poor to provide one, in consequence of her sudden death from typhus fever. After two or three hours he came back for another coffin: one of his children had died. In the course of the same day he came back for two more: in all, four had died: in less than two days he was carried off himself. On another occasion, our informant was sent for to visit a house, and found three dead bodies on the floor, no bed in the room, and the place filled with people. Thus fever sweeps the ill-conditioned neighbourhoods. A remedy must be found—the mere pulling down of dilapidated and disreputable buildings is of no avail—it is only removing the poor from one district to another, and is no doubt at the present time raising the cost of rent to those who have the least means of paying it.

We once overheard a conversation between a veteran compositor and a young author: the latter was insisting that a certain amount of matter should be put into a particular space. "Type, sir," said the printer, "is not india-rubber, which can be pressed into less than its natural bulk." Human beings, like the compositor's type, also require a certain amount of space. The number of poor—the very poor—is unfortunately great in London, and this class must be provided for. In all directions the dwellings of the worst sort are being swept away: within the last few years, hundreds of houses have been demolished in the City liberties, in Marylebone, St. Clement Danes, and other parishes too numerous to mention. Persons congratulate themselves on the removal of "rookeries," and look with complacency at the noble warehouses and streets which rise to occupy the sites of the wretched hovels. But what has been done in this great metropolis to provide for the living creatures who by the improvements have had their hearths destroyed? Literally nothing. A short time ago we witnessed the ejectment, from Orchard-place, Portman-square, of nearly 1,500 men, women, and children: the place was in a bad condition, and fever was a constant visitor; yet the people were sorry to leave the place, knowing the difficulty of obtaining, with their limited means, a better lodging, or even any lodging at all. Single men could manage well enough, but it was distressing to see the wretched furniture, if so it could be called, and families in the muddy street on a rainy day, the parents hunting in all directions to obtain shelter. These poor people would go, as a matter of course, to the already thickly-crowded parts of Marylebone, St. Pancras, Clerkenwell, &c. for no provision had been made for them of an improved kind. "We must try our relations, for my husband cannot get a lodging," said a woman sitting in the rain, with her children, and some household goods which would not be to a broker worth half-a-crown; "surely they must take in their own flesh and blood." Poor things!

The Associations for improving the dwellings of the industrious classes in London, have not yet extended their aid to the large class to which we are alluding; they have, however, done much to remove the prejudice against new and convenient dwellings: respectable mechanics and others have gladly availed themselves of the private and convenient arrangements of the so-called "model houses," which where placed in eligible situations, will be a certain source of profit to their constructors.

Small, decently-built houses, which let for a rent of from 15*l.* to 18*l.* a year,—that is, from 6s. to 7s. per week,—seldom remain unlet. Persons may go over many streets in the Borough and other parts, where this class of houses are built, and not see a single one in good repair to let. The people, in too many instances, are annoyed with bad drainage and cesspools, but on complaint being made to the landlords, they are generally told, "If you do not like it you can leave; I can get plenty of tenants." A clerk or mechanic, with a family, and an income of about 30s. a week, can scarcely afford to pay 6s. a week for house-rent, yet what is he to do if he wish to keep himself in respectable privacy? There is no alternative but to hire part of a house let to others, a most uncomfortable and generally bad arrangement. To those who are poorer, the difficulty of obtaining proper house accommodation is still greater, and the profit to the landlord or agent proportionably higher.

As we descend in the scale of respectability and amount of property possessed by persons, the sum paid for inferior houses is proportionally increased: 3s. 6d. and 4s. 6d. and even more, is paid for a single room unfit for human habitation. See, for proof, the back parts of Peter-street, Westminster, Charlotte's-buildings, Gray's-inn-lane, &c. &c.

The system of agency in connection with such property is a necessary evil: the landlords cannot manage the tenants, and in many instances would be ashamed to be seen applying for money for such places. A proper man is found to manage the business, who, in too many instances, derives large profits from the necessities of the tenants.

This condition of things is a sad fact, which not only distresses the poor population of London, but other large cities. Many have no doubt sunk by misfortune and their own faults into these "immortal sewers," as the Rev. G. S. Osborne has called the dark shadows of city life; and thousands are born here and placed in circumstances where the chance of leading a proper life is almost hopeless. Education is but of little use to those living in filthy lanes and such over-crowded dwellings as have come under our observation. The first great means of raising the poorest classes is to reform their dwellings, to provide places wholesome and well ordered, at rents which they can afford to pay. We want, in London, first, decent yet not luxurious sleeping accommodation and means of washing, &c. for those who are entirely destitute; secondly, rooms for poor families, in which the members of them can be kept distinct, at rents ranging from 1s. 6d. to 2s. and 2s. 6d. a week. We believe that dwellings of this description, extensively carried out in a proper method and well constructed, would be attended with great benefit, and, moreover, would pay: and, thirdly, the erection of houses in flats, at rents of from 4s. to 10s. per week, the extent and finish to be graduated according to the rent.

In the City of London many houses have been taken down, but no provision whatever has yet been made for lodging the persons thus driven out. A large sum of money was voted by the corporation some time ago to erect dwellings for the working classes, and it is to be hoped that they will forthwith proceed to carry out the intention.

We asserted at starting that disease can be lessened by sanitary arrangements. The evidence to this effect is undeniable, and it has been largely increased within the last few days by the publication of a pamphlet on the subject by Dr. Southwood Smith.*

The writer shows, first, that the buildings for families erected by the societies afforded a return last year of nearly 5 per cent. on the outlay; secondly, that while the deaths in the whole metropolis during the year 1852 reached the proportion of 22 and a fraction in the thousand (that is, 22 persons died in every 1,000), the mortality in the establishments of the association (the average of the whole) was but 7 and a fraction, "consequently, the total mortality in London generally, taking together all classes, rich and poor, was proportionally more than three times greater than the mortality in these establishments." In the Kensington Potteries, the deaths equalled 40 in 1,000! And, thirdly, the Doctor gives examples out of doors, showing the efficacy of sanitary provisions to prevent the recurrence of epidemic diseases, and greatly to reduce the rate of mortality. One of the most unhealthy spots in the metropolis has recently afforded a signal instance of it:—

"Three years ago Lambeth-square was as unhealthy as the Potteries. The population remained the same; the occupations, mode of life, and habits of the people remained the same; no change of any kind took place, excepting the introduction of certain sanitary improvements. No history is more instructive.

Lambeth-square is situated in the Waterloo-road district of the parish of Lambeth. It consists of 37 eight-roomed houses which let at about 28*l.* a year, and are chiefly occupied by the foremen of large establishments, and the more skilled and highly-paid class of artizans. In outward appearance, and in their general aspect within, these houses are very superior to the ordinary abodes of the same class in other parts of the metropolis, and present no obvious cause of peculiar unhealthiness.

According to the last census, this square contains a population of 434 souls. Among this number, on a house-to-house examination, it was found that in one year (1851), there had occurred 80 attacks of zymotic† and other diseases, and 24 deaths; that is, nearly one person in every five had been laid up with sickness, which had proved fatal in the proportion of 50 and 60 in 1,000.

When built about twenty years ago, these houses had been fitted up with untrapped closets, communicating with flat-bottomed brick drains, then in universal use. A number of the drains passed directly under the houses: they were wholly unprovided with any regular water supply for cleansing: consequently, instead of carrying away the ordure, they retained it within the

* Results of Sanitary Improvement, illustrated by the Operation of the Metropolitan Societies for Improving the Dwellings of the Industrious Classes, the Working of the Common Lodging-houses Act, &c. By Southwood Smith, M.D. London: Charles Knight, and J. Cassell. 1854. This pamphlet can be had for 1s. 9d. per dozen, or 12s. 6d. per hundred, and should be largely circulated.

† From a Greek word, signifying to ferment. The term is employed metaphorically, as if this class of diseases were produced and propagated by a kind of fermentation.

houses; and the emanations arising from the stagnant mass of putrifying matter, were carried back into the houses, through the open closets, in a proportion increasing with the obstruction in the drains.

At the beginning of 1852, a new system of drainage was applied to the whole square. Water-closets were substituted for cesspools, and stoneware pipes for brick drains, and the apparatus was provided with an adequate supply of water.

By these improvements the houses were placed in the same sanitary condition essentially as the society's dwellings. The result on the health of the inhabitants was strikingly similar. On a re-examination of this property in November of the present year (1853), it was found that the mortality had been reduced from 55 in 1,000 to 13 in 1,000."

Results so extraordinary are beyond hope, and almost beyond belief, but derived from sources thus widely different and independent, they are confirmatory of each other. They have further received decisive confirmation to a most unexpected extent from the operation of the Common Lodging Houses Act.

"In the town of Wigan, for example, there are twenty-four lodging-houses, through which have passed during the last year, 29,655 lodgers. The superintendent of police reports, 'There has not been a single case of fever in any one of those houses since the Act has been in force.'

The town of Wolverhampton affords a still more striking instance. In this town there are 200 lodging-houses, through which have passed during the year the incredible number of 511,000 lodgers. The superintendent of police reports, 'There has not been a single case of fever in these houses since the Lodging Houses Act has been in force in July 1852.'"

Moral pestilence has, at the same time, been checked. The intemperate have become sober, and the disorderly well conducted, since taking up their abode in these healthful and peaceful dwellings. No charge of crime, no complaint even of disturbance has been lodged at any police station against a resident in these dwellings since their first occupancy.

With such results before us, shall we not persevere? We *know* that it is necessary to eat to maintain life, and we eat; we *know* that if the hand be put into the fire, it will be burnt, and we take care not to put it there; we equally well know that by the provision of salubrious dwellings for the labouring classes,—fresh air, pure water, and good drainage,—we save money, suffering, virtue, and life; and in the name of all we hold in reverence, let us endeavour to provide them!

It is impossible to over-estimate the practical importance of the results which are now before the world,—"They show the extent to which, under circumstances of the utmost difficulty and danger, it may still be possible to save life: they open a prospect of the physical and social improvement of the people, such as, before these results were obtained, there was no warrant from experience to anticipate: they indicate that the first step in this progress must be the removal of the degrading influence of the present dwellings of the labouring classes, and they prove the practicability, without loss to the capitalist, or additional rent to the tenant, of the universal substitution of houses for hovels. There must be compulsory enforcement of certain sanitary conditions wherever there are human habitations. There must be provision for the supply of better-ordered dwellings for the industrious classes: dwellings accessible to air and light, and no longer producing that malarious depression which resorts for relief to the fatal stimulus of ardent spirits: dwellings compatible with cleanliness, comfort, and those decent observances which are necessary to self-respect, and which must become habits before there can be respect for the happiness, property, or life of others. Until such dwellings are within the reach of these classes, they cannot be raised out of that physical debasement which has lately been so painfully depicted, and which has been shown to be the portion (the unnecessary portion) of large masses of the people. The physical improvement of these masses, it is now admitted, must precede their intellectual and moral elevation. When the house ceases to be a sty, and possesses the conditions which render it capable of being made a home, then, but not till then, may it receive, with some hope of benefit, the schoolmaster and the minister of religion."

LECLÈRE, VISCONTI, AND GAU.*

IN November last it was my duty to communicate to you the death of our honorary and corresponding member, Monsieur Fontaine. I little expected so soon to have to inform you of other losses from among those with whom I stood at the tomb of Percier and Fontaine, when I had to express to those around me your sympathy in the loss which France had then experienced: little did I think, as the venerable and accomplished Achille Leclère stood trembling, weeping, his grey hair floating in the wind, and uttering the few words to which his grief gave vent, that he was standing himself on the verge of eternity: but he, too, has followed his brother architect. On the 26th of December last his remains were accompanied to the Cimetière du Nord, amid the regrets of his colleagues, his friends, and his pupils; and eulogiums were pronounced by Messrs. Raoul Rochette, Vinet, Visconti, and Isabelle.

It appears that M. Leclère carried off the *Grand Prix* in 1808, at twenty-two years of age—a very unusual circumstance in the life of an architect. The programme of the competition was a large establishment of public and private baths for the capital; and the manner in which he had carried out his conception was most remarkable. During his residence at Rome the studies of the young *pensionnaire* were always well chosen, and conscientiously and well executed. His restoration of the Pantheon was the crowning point of his many researches amongst antique monuments, and placed him amongst the most distinguished architects who had given their attention to the restoration of that magnificent building of the Augustan age. M. Leclère also made an interesting collection of studies on the modern edifices of Italy. A student in the celebrated school of Percier, whose taste and learned maxims extended throughout Europe, the pupil, after his return to Paris, was attached by his worthy master to the administrative department of the Conseil des Bâtimens, in whose works he took part for thirty years; and when the celebrated Professor was unable to continue his labours in the school, he intrusted them to the direction of M. Leclère. These circumstances were the chief cause which prevented M. Leclère from being engaged in the erection of more public buildings; however, he executed in France many large country houses, and in Paris some of the finest houses of modern times. One of the most remarkable monuments in the Eastern Cemetery of Paris, that of Casimir Pèrier, was designed and executed under his direction. His brilliant *début* as pupil, and his subsequent works as *pensionnaire* of the Academy, were followed by M. Leclère's early entrance into the Institute, where he was called upon to take part in the works of the Professors in the School of Fine Arts, who appointed him "*Archiviste*." Of a kind and conciliating disposition, full of love for his art, persevering in those principles which he believed to be the best, encouraging those pupils who were studious and distinguished, M. Leclère well deserves all the encomiums which accompany his memory to the tomb. M. Leclère presented to this Institute some very important tracings of the constructions of the Pantheon at Rome, next the portico, with a view to explain whether the portico formed a portion of the original design, or was a subsequent addition of a later period: they are preserved in our collection of original designs and drawings, which are now forming a very valuable series.

In the funeral *cortège* of M. Leclère, just noticed, you will perhaps have remarked the name of Visconti, as one of those who addressed the assembly at the grave of his friend: within one short week Visconti was himself cut off suddenly by an apoplectic fit, and borne to the cemetery of Père la Chaise amidst the grief of all France—and—may I not add?—of all Europe. M. Visconti was present on Thursday, the 29th of December, at the first meeting of the commission for the Exhibition of 1855, at the Palais Royal, under the Prince Napoleon, and remained there from one to half-past three o'clock: he then left, and went to his office at the Louvre with a friend, M. Semard: with him he had an animated conversation, and having to dine out, he asked for his carriage, but it being then only half-past four, and earlier than the time he usually quitted the works, it had not arrived, and he sent for a hackney carriage. M. Semard saw him into the carriage, and it drove off, and soon reached his residence: the coachman got down and opened the door, when he found M. Visconti quite dead.

He had just reached the culminating point of glory for an artist, by having had confided to him the completion of the Louvre, which had occupied the genius of French architects for two centuries. He had reaped the fruits of laborious and profound studies in the very highest departments of our art, by solving the problem, which seemed to present difficulties apparently irreconcileable and almost insurmountable; and he had commenced, and to a great extent carried into effect (to the height of 30 feet in some parts), with inconceivable rapidity, the outlines of his grand design, which united all suffrages, and promises to render the palaces of the Louvre and Tuilleries the finest sovereign-residences in the world. At the same time it must be confessed that the conceptions of other architects, as Percier and Fontaine, and more recently, of M. Dusillon, had considerably assisted him in the solution.

I had from his own lips the following account of his appointment to this important work. He received very unexpectedly, about three years since, a notice from the officer of the household of the President of the Republic, to the effect that he would be received next day at the Elysée Bourbon at a certain hour: he duly attended, and was soon ushered into the cabinet of the chief of the State, by whom he was received most courteously. "It appears to me," said Louis Napoleon, "that the palace of the Louvre should no longer remain in a condition which reflects disgrace on the Government, and it is desirable that employment should be provided for the working classes: I have therefore conceived the design for the completion of this palace, which I wish you to undertake." "Sir," replied Visconti, "I am gratified by so honorable a mark of your confidence, but I venture to remind you that M. Duban is architect of the Louvre, and it is impossible for me to interfere with a position which he fills with so much credit and ability. "True," replied the President, "but M. Duban is architect of the works of the Old Louvre: I wish you to undertake this appointment as architect of the works of the New Louvre, which are to be quite distinct, and to be a charge entirely separate, and not interfering with or superseding the other." "In that case," said M. Visconti, "I am quite at your command." The prince then explained a scheme that he had himself conceived and roughly sketched, which he wished Visconti to draw out architecturally, and asked how much time would be required. When informed a month, he said, "Well, in a month I shall expect you to come, and you shall be admitted at once." At the end of that time Mons. Visconti took the plans, and submitted them to the President, who highly approved of the manner in which his views had been carried out. Mons. Visconti then ventured to suggest that, in the course of study to which the plans had given rise, it had occurred to him that a much nobler and more desirable arrangement could be adopted, which he should wish to submit to his highness's approval. The prince immediately encouraged the architect to develop his views, and this he did in his succinct, clear, and convincing

* The following is the memoir read at the Institute by Professor Donaldson, to which we referred last week.

manner, so as to carry the conviction of the President, who then asked how much time he would require to prepare the necessary drawings. Six weeks. "Enough," said L. Napoleon; "and in six weeks bring me your project thoroughly considered." Accordingly, in six weeks Visconti again attended at the Elysée Bourbon; but, during the interval, the Republic had become an Empire, and the President Emperor. It was sufficient for Louis Napoleon to see the design which his architect had prepared: his ready aptitude seized all the superiority of the arrangements proposed, and he expressed himself perfectly satisfied. Taking out a paper from his breast-pocket, he presented it to Visconti, saying, "Take this document: it constitutes you architect of the new works of the Louvre." In fact, it proved to be a formal document, signed by the proper authorities. The Emperor desired him to be ready to attend a council in a few days, and explain the plan, and to be prepared with general estimates as to the cost. Our architect, of course, was punctual to the appointment, and while awaiting the meeting of the council, engaged in conversation with several of the members. Being anxious to ascertain their sentiments, he asked their opinion: one thought it a very fine design; another, that it must cost a great deal of money; but none would venture to pronounce that it was a desirable and executable project. At length the council met, and the most vehement objections were taken to the idea; the principal one being, I believe, to its vast cost. At length the chief minister said, "It is the wish of the Emperor." These words at once calmed the storm, like oil poured upon the waves: not a dissentient was heard: many raised their voices in praise of the noble conception of the Emperor, and the immense talent of the architect; and the requisite millions no longer forming any obstacle, the design was approved, and ordered for execution with the necessary funds.

I do not at the moment call to mind any very large public building that M. Visconti has erected at Paris; but the monument of Molière in the Rue Richelieu, the fountain on the site of the old Opera Place Louvois, the noble fountain of the Place S. Sulpice with the sedent statues of the four great doctors of the Gallican church, a fine façade at the angle of two streets in the Reu Neuve des Petits Champs, and lastly, the tomb of the Emperor Napoleon under the dome of the Invalides, attest the fertile imagination, originality, knowledge, and taste of Visconti, and doubtless contributed to indicate to Louis Napoleon one capable of realizing the noblest projects in his art.

In October last I experienced many marked attentions from our colleague, due doubtless to the position I hold among you as your foreign secretary. He received me at his house, and I must own that his reception-rooms displayed refinement and elegance superior to any other private residence in Paris. The furniture was of a superb description, and full-sized chiffonnières of black ebony with glazed fronts contained most exquisite enamels of various sizes, dishes and vases of Raffaelle and Lucca della Robbia ware, or china of the revival: there were fine bronzes and choice pictures: in fact, one seemed to breathe an atmosphere of art, evidencing the host a man of refined taste, and one who possessed a perfect discriminating relish for all the arts.

He was heir to a great European name, one of a family distinguished for archæological learning, and has nobly maintained the reputation of his ancestors. His personal presence did not seem to indicate the noble qualities within him; but his exalted genius, his simple unaffected manners, his cordial address, his loyal and generous sentiments, won the confidence, the esteem, and admiration of all who were admitted to his friendship. I need hardly say how highly he valued the gratifying compliment paid him by this Institute in electing him an honorary member. He intrusted me for presentation with a copy of the work showing his design for the completion of the Louvre, inscribed with his own hand, and, at my request, has sent you full-sized drawings of certain iron girders for the floors, one of 70 feet span, which he purposed employing. Hereafter, with your permission, I may perhaps give a history of the Louvre and Tuilleries, note the various projects for their union, describe that of our lamented colleague, and explain some points of ingenious construction in the floors.

Last Wednesday, only five days ago, his remains were deposited in Père la Chaise, followed by one of the carriages of the emperor, and attended by many ministers of state and noble functionaries, the leading men in science, literature, and the fine arts; his pall borne by the most distinguished men in France, and accompanied by the tears and regrets of several hundred workmen, who felt that they had lost indeed a noble leader. The long line of streets which led to the cemetery abounded with testimonies of respect to the memory of this great man. And a minister of state, the perpetual secretary of the Academy of Fine Arts, our colleague, M. Caristie, M. Rohault de Fleury, and M. le Baron Paul de Richemont, successively addressed the thousands assembled, as did also our honorary and corresponding member, M. Hittorff, from whose touching discourse I borrow a few sentences, which seem penetrated with a due appreciation of the character of his colleague and friend.

"The loss," said M. Hittorff, "of an artist, who united the highest faculties of the mind to the no less noble qualities of the heart, is afflicting to those who were privileged to possess the opportunities of appreciating in him those high natural gifts. But when, as now, this artist is carried off in the midst of the most important works, at the moment when he might naturally look forward, as we all might, to their happy completion and glorious success, this loss is no longer a mere family bereavement, it is a public calamity. Certainly, in the immense and grandiose work, which fell to the lot of Visconti, it required, in addition to the conception of the architect, a rare combination of circumstances to carry up, in less than two years, that which had occupied nearly half a century under the greatest of our kings; it required still more to know how, as did our friend, by incessant activity, by a rapid *coup d'œil*, by a discernment as prompt as just, to render available all those precious elements, and to organize an army, as it were, of able and intelligent assistants and artificers to carry out the work.

"The head of the State was doubtless glad to connect his name with the completion of the finest palace in the world, and, perhaps, still more to recall by such a work, minds which had too long been led astray; nor did the architect peril his fair fame in this surprising rapidity of execution, which astonished all Paris, and excited the wonder of those foreigners who flocked thither. Mons. Visconti bestowed the utmost care upon the soundness of the construction, as upon the exquisite beauty of the design. These incessant occupations and flattering combination of circumstances did not at all alter the natural character of our friend. Although naturally aware of his own capacity, surrounded by numerous gifts of fortune, raised to the enviable position of Architect to his Emperor, Member of the Institute of France, President of the Central Society of Architects, nothing altered the constant amenity of his character; he was still the same unaffected modest man, always ready to oblige, and ever disposed to recognise the merit of others."

To such a eulogium it is unnecessary for me to add one word; but, in conclusion, I beg to notice an inadvertent expression which escaped M. Rohault de Fleury in his address: it is contained in these words,—"*It has been said with just reason that the loss of Monsieur Visconti is irreparable.*" To his family and friends such a bereavement is irreparable: but you and I, gentlemen, must feel, that however great this loss may be to architecture, it cannot be irreparable to France, when she possesses so many men of such distinguished talents to uphold the high rank which she has attained in the commonwealth of the arts.

It is my melancholy duty to announce also the death of M. Gau, also our Honorary and Corresponding Member, author of the noble work on Nubia, and architect of the new Gothic church, S. Clotilde, in the Faubourg S. Germain. M. Gau had also erected a very extensive prison at Paris, and had executed various other works of considerable importance. He was a native of Cologne, but had passed his professional life at Paris.

These few notes, hastily put together, may prove to our professional brethren abroad, that we are watching their works, admiring their talents, sharing their sympathies. Let architecture, at all events, produce harmony and good feeling among all her sons, in whatever country they may be.

PHOTOGRAPHY AND THE PHOTOGRAPHIC EXHIBITION.

ONE of the marvels of the present time, and certainly not the least interesting of them, is the rapidity with which photography, a creation of yesterday, has attained its present position; a remark which the exhibition just opened in Suffolk-street by the Photographic Society of London will amply justify. The first impression on entering the room is one of unmixed admiration and astonishment at the number and variety of the pictures, amounting to about 1,000 specimens. Nevertheless, although many of them are eminently beautiful, we feel bound to say that, while some individual exhibitors have undoubtedly improved, and new names appear in the catalogue, the art itself has made but little progress among English photographers since the exhibition held at the rooms of the Society of Arts about a year ago. We had hoped that the formation of the Photographic Society would have led to a more systematic investigation of the chemical agencies upon which the art is based, and to a prompt and unreserved publication of the result of such investigations. Such, however, appears not to have been the case: the council have done nothing more than call the members together seven times within the twelvemonth to talk the matter over among themselves, without, as a body, having issued or sanctioned a single communication tending to the improvement of the art, or even having made an attempt to publish a clear and minute account of the several processes already in use. Supposing they had it not in their power to promulgate anything *new*, it might have been expected they would have applied a portion of the ample funds placed at their disposal to the obtaining and disseminating, for general use, of some authorized and well-tested exposition of all the best means known or employed *up to the present time*. This want—and a most urgent want it is—was well expressed by the honorary secretary in the very first number of the journal, when he says,—"One of the simplest, but not least important, offices of the society, will be to define *what is already known*. In the works which at the present time treat of photographic subjects, our attention is constantly attracted by the announcement of new discoveries, which on inquiry, turn out to be old: there being *no recognised record* to which students may refer, to ascertain *what has been already done*, they are continually rediscovering the same facts, and wasting time in the working of unprofitable veins of ore." Such was the unsatisfactory position of the photographic student in March, 1853, and such, or worse, is it in 1854. The spread of this *elementary* knowledge is the more important, because it must be borne in mind, that while the *best pictures*, as such, will continue to be produced by those who devote their whole time to photography, it is to those hundreds of men who, having occasion to travel to distant lands, and to the most remote corners of the earth, on business, and who, if the several photographic processes were clearly and minutely explained, giving them a fair chance, or rather an assurance, of success, would arm themselves with a good lens and camera for their own recreation, if for no higher purpose—that we may look for shadows of scenery, character, costume, and modes of life of the highest interest. It is possible, nay, probable, that those who are now practising photography successfully, are producing pictures quite as good as the present knowledge of photographic chemistry will enable them to do, but this knowledge is at present confined to a few. Nine-tenths of photographers are *no chemists*, and depend entirely for success upon a patient and careful carrying out of such processes as good chemists or lucky operators may be pleased to communicate to them; but,

as the majority of such successful operators, finding a wise and fertile field open to them, have taken to practise the art professionally, it follows, as a matter of course, that the mass of amateurs are left to grope their way in the dark, and, having no other guide, are constantly being misled by the many faithless books published on the subject. No wonder, then, that so many, after expending large sums in the purchase of cameras, lenses, and all the manifold and indispensable apparatus and materials, should, after a long, tedious, and fruitless attempt, throw it up in disgust. That such is the case, is evident from the fact, that out of the immense number of persons who, from first to last, have taken up photography, the catalogue contains the names of less than 100 English exhibitors, and that, of the 1,000 pictures exhibited, 153 have been produced by four persons, viz. Fenton, Delamotte, Berger, and Stokes. Can this state of things be remedied? The day is near at hand when the society will have to elect so many of the council as shall be required to fill up the vacancies created by the retirement of such members as go out by rotation; and on the manner in which they shall discharge this duty, will depend the future fate of the society itself. They will, of course, look among the most expert amateur photographers of high standing, for men of business-like habits. They must carefully weigh the propriety of electing *professional* photographers. Each professional photographer has some secret or peculiar process of his own, which he, of course, keeps to himself. He makes money of it, and it cannot be expected that he should disclose it, or that he would earnestly lend a hand to the publication of any process, treading upon the heels of his own, which might happen to come before the council. But there is another class of candidates to whom the most decided objection must be made; we mean those who deal in photographic chemicals. We lay the more stress on this objection, because an active canvas was carried on in their favour in the Exhibition-room on the evening of the opening. To elect such men would be a fatal step. We do not object to them because they are in trade, but because they trade in the wrong article. Take an instance. One of the greatest wants of photographers, at this moment, is a good recipe for iodising collodion. Now place on the council the makers of collodion (and we understand that three of them, at least, expect *to come in*), all of them advertising their own collodion as better than their neighbour's, would it be reasonable to expect that they could, by any possibility, become willing parties to the publication of any process, by which, if it succeeded, their own interests would be so materially affected? It would not; and the operations of the council, when they have made up their mind to do *something*, as they speedily must, would be constantly clogged by the influence of members having so decided a pecuniary interest in *secrecy*, while what the society demands is, above all things, *publicity*.

The journal of the society by no means comes up to our notion of what such a publication ought to be; but seeing that in the last number of the year the editor declares that "it has more than fulfilled the largest expectations formed of it," we must despair of any improvement.

All these matters concern the Photographic Society alone, for it is evident that whether that society stand or fall, photography itself is safe. Strictly scientific in its origin, and already beginning to rank as an art, the immense value of the aids it will undoubtedly afford to both the arts and sciences in a way and to an extent unattainable by any other means is too obvious to be insisted upon. Although photography is still in its infancy, the time has arrived when its professors must begin to take higher ground, and to look about for some systematic application of their powers to particular objects. One man to one thing, one to another. The Count de Montizon illustrates natural history, how beautifully and truthfully, this exhibition proves. The Rev. T. R. Kingsley and Mr. Delves are leading the way to a photographic development of the wonders of the microscope. Delessert's reproductions of scarce and valuable engravings already equal, in an artistic point of view, the originals. Rousseau and Deveria's zoological photography, of surpassing beauty, is already well known, and promises immense facilities to the student. Mr. Llewellyn's rock scenery shows with what advantage it may be applied to the study of geology. Contencin's reproductions of chalk drawings and paintings are charming things. The Viscount Vigier's scenery in the Pyrenees, most masterly productions, reminding one of Mr. Stewart's views of last year, show how truly and beautifully the several distances in these gigantic localities can be rendered.

Mr. Hennah's portraits are faultless: one would not begrudge a journey to Brighton for no other purpose than to be Calotyped by him. Sir Thomas Wilson's "Snow-storm" (692) is excellent: it is really a snow-storm.

To the architect and civil engineer we commend a consideration of Mr. Fenton's views of the progress of the bridge now constructing across the Dnieper; and to Mr. Delamotte's views of the works of the Crystal Palace at Sydenham, as instances of the valuable aid photography is destined to afford to our craft; to say nothing of the stone for stone representations of all the chief edifices in all parts of the world, with numerous examples of which our readers are already familiar. Mr. Tenison's panoramic view of Toledo is an interesting specimen. The rural scenery of England has had justice done to it by Messrs. Rosling, Bedford, Stokes, Sedgefield, Turner, and others. The ladies Neville, too, are entitled to high praise for their spirited contributions. A little later, when, by the aid of the Bromides, or other improvements in the iodizing process, foliage shall be as easily obtained as any other object, only think what delicious bouquets of flowers the lady members will be showering down upon us!

We here close our brief notice of this most interesting exhibition, trusting that the society and its council will do all they can to hasten the day pointed at by Mr. Berry, of Liverpool, when "the glorious *uncertainty* of photography may no more be heard of in our midst."

ON THE FRENCH METHOD OF CONSTRUCTING IRON FLOORS.*

IN describing the system of the "*Planchers en fer*," or wrought-iron floors, it is not my intention to enter into a detailed account of the various experiments made before the systems now so generally used in Paris were brought to their present state of perfection,—to occupy your time with calculations of the resisting powers of rolled iron,—or discuss the suitability of the forms adopted; but avoiding all that might tend to embarrass the question, I propose to confine myself to a succinct and simple description of the systems now most frequently executed, and to furnish such practical information as I have obtained by visiting the works where they are employed, and hearing the opinions of the architects conducting them.

It would seem that, for some years past, floors composed of rolled iron joists have been occasionally executed in Paris: in most cases the joists were flat and without flanges: such constructions were known as the Système Vaux. The systems to which I am now about to draw attention are little more than an improvement in the form of the joists, and may be said to have come into general use at the commencement of the extensive alterations in the Rue de Rivoli, in the spring of 1852.

In the various works treating on the subject several systems are described, but upon visiting the Parisian buildings now in progress, we perceive but two; one purporting to be the system of Mons. Thuasne, and the other appearing to be that of any one who may get an order to execute it. From the observations made by parties conversant with the matter, I am induced to believe that the different systems are no longer recognised in general practice, and that the architect or builder combines at pleasure the advantages of all.

The "Système Thuasne" may be described as being composed of joists of iron, rolled in the form of the double T, and slightly arched in the proportion of 0·005 mètre in the mètre, or of 1 in 200. They are placed at the distance of 1·00 mètre (or 3 feet 3⅜ inches) from centre to centre, and are united by interties, formed of flat iron bars, fixed at the same distance of one mètre apart. These interties rest on the lower flanges of the joists, and are let into wrought-iron bands fixed round them: a small pin is then driven through the hole at the extremity of the intertie, between the joist and the band, and the transverse tie is formed.

The fantons are light iron rods, from ⅜ to ½ inch square, of the same length as the joists, and parallel with them: they are laid on the interties, and bound to them with copper wire, and may be said to take the place of the ceiling laths. Some of the joists and interties next the walls have their ends so formed as to make them act as ties: thus the ends of the system being firmly built into the walls, the sides of the house are effectually united. The iron work is usually painted, and allowed to dry thoroughly, before it is brought to the place of construction.

The above-described net-work of iron being completed, the next process is the plastering or grouting. This process differs so materially from the English mode of forming a ceiling, and is so important a part of the scheme, that it requires to be understood before the success of the whole can be comprehended. It is done thus: a board or flat centering is placed under the part intended to be filled in: a grouting composed of the coarsest quality of plaster is then poured in upon it, and running in between the lower portions of the iron-work, it stops against the board beneath, and forms the ceiling of the room below, which one coat of fine plaster serves to finish. The plastering thus applied is from 2½ to 3 inches thick, and sets in about half an hour: it shortly becomes as hard as stone, and assists much to stiffen the floor.

The second system referred to differs in some degree from the first, the joists being placed nearer together, perhaps from 2 feet 4 inches to 3 feet apart. The interties are formed of iron bars, from ⅜ to ½ inch square, bent at the ends so as to clip the upper flange of the joist, and again crooked downwards to rest on the lower one: the elbow so made pressing against the side of the joist, a strut and tie is at once formed between the joists. Interties upon this principle are of course made as nearly as possible of the same size, and when placed between the joists, a blow with a hammer is sufficient to fix them in their position, and make them touch at the required points. They are placed about 3 feet apart, and as nearly as may be in a direct line, so that one may resist the action of the other. The fantons or light iron rods lying parallel with the joists are laid on the interties, and the grouting performed as in the former method. The floors of the New Louvre are made upon this principle, and filled in with pottery.

It need scarcely be remarked of these rolled iron joists, that they may be made of any intermediate thickness between the stoutest and lightest of the patterns given, the depth of course remaining the same. This offers some advantages, particularly in France, where iron is dear, and the apartments divided into rooms of very different dimensions; as, in many cases, it may be desirable that the floor of the smaller room should be of the same depth as that of the larger one; but the span being less, the lighter description of joist would suffice, the internal walls being assumed to have the necessary strength to take the bearing.

As I have elsewhere observed, the grouting is always more or less of plaster, but in many cases the space between the joists is filled with pottery, that is to say, small cylinders of baked earth, about 7½ inches high and 4 inches in diameter, having the ends closed, and somewhat resembling flower-pots: these are bedded in a layer of plaster, poured in between the lower portions of the iron-work, and then receive a grouting to fill in the interstices. Perforated bricks, and pipes like those used to form land drains, are manufactured for the purpose, but are rarely used. Where a wooden floor is required (which is frequently the case), it is nailed to small joists notched in between the iron joists: sometimes, however, where

* Read at the ordinary general meeting of the Royal Institute of British Architects, January 9, 1854. By H. H. Burnell, Associate.

economy of space is less an object, the wood joists are laid across the top of the iron work.

With regard to the relative merits of the two systems, little need be said: that of M. Thuasne binds the joists more effectually at the bottom, where they are best calculated to resist the expansion of the plaster, and it may also be accompanied with some trifling economy of iron, but notwithstanding this, it has the character of being on the whole the dearer, and on this account the other method is more generally adopted. Both offer advantages on the score of being easily fixed, and when executed with common intelligence, answer well, producing a light fire-proof floor in two-thirds of the space of the ordinary wooden construction. It will be seen that floors made upon either of these principles are as incombustible and sound-proof as most others professing to offer the same advantages. It is clear that violent heat, if long continued, would calcine the plaster and ultimately bend the joists; but even in this case, were pottery of any kind judiciously employed, it would offer a serious opposition to the flames, and would be infinitely less dangerous to those in or near the building than cast-iron girders or joists with heavy masses depending upon them. I have here, however, alluded to an extreme case, as it is highly improbable that an extensive conflagration should take place where the floors and staircase are of incombustible materials.

It is with some misgiving that I speak concerning the cost, feeling that it is unlikely that a common calculation made from the French tariffs should be found a correct guide to the expense in England, as so much depends on the skill and enterprise of the parties undertaking the manufacture, the effect of competition, and the demand for the material. Perhaps for present purposes it may suffice to consider the probable prices in England to be the same as those of Paris, for it should be remembered that though we have iron in greater abundance, the wages of English exceed those of French workmen. The want of a material like the French plaster will next be felt. I am not aware that we have anything that effectually takes its place at a moderate expense. The price of French plaster in London is 32s. or 33s. per ton, about 30 per cent. dearer than in Paris; but I believe I am correct in saying that this plaster, when fresh, may be mixed with an equal quantity of sand, cinders, or ground brick, and answer the purpose in question. The cost of grouting in England must therefore be considered as double that of Paris.

The accompanying table is translated from a tariff of prices circulated by M. Thuasne last year: it also gives the weights and depths of the floors for the various spans.

PARIS PRICES.

Bearings.				Depth of Joist.	Depth of Floor complete.	Weight, per Square.	Iron-work, per Square.		Including Grouting (12s.) per square.		
Ft.	In.	Ft.	In.	Inches	Inches	lbs.	£	s.	d.	£	s.	d.
From 10	0	to 11	6	4	7½	370	2	10	6	3	11	6
11	6	—13	0	4½	7½	420	3	6	6	3	18	6
13	0	—16	6	5½	8½	465	3	14	4	4	6	4
16	6	—20	0	6½	9½	510	4	1	0	4	13	0
20	0	—23	0	7½	10½	605	4	17	6	5	9	6
23	0	—26	0	8½	11½	700	5	12	4	6	4	4

I regret that I am not in a position to furnish more ample information on this head, and that I am unable to produce accounts of some experiments which might convey an idea of the resisting powers of the floors when complete, though I know that these experiments have been made; but, perhaps, the general adoption of one or other of the methods may be received as the best guarantee of their results being satisfactory.

In connection with the subject of the general use of iron in France, much might be said on the French manner of constructing wrought-iron girders, but as the most remarkable of these are to be found in the buildings of the New Louvre; and as we have heard that all matters connected with that important building will be treated at a future meeting by our honorary secretary for foreign correspondence, I shall abstain from offering any remarks on the subject.

In conclusion, I would add that I have been induced to offer the foregoing remarks, because I conceive that an invention that is well received in a city so important as Paris, must be practically interesting to us, particularly if in our own country the advantage of that invention be partially wanting: it is true that our mode of building and inhabiting our houses differs generally from that of the French capital, where they are usually let in apartments or flats, but in many instances the same arrangements occur here, and in such cases, at least, we might avail ourselves of the experience of our talented neighbours. Many prejudices and conflicting interests must be overcome before any invention can be generally adopted: those of the Parisian building world seemed to have yielded readily to the desire to improve, and the opportunities offered to the development of a new method by the extensive character of their alterations; and though the improvements in our own metropolis proceed with less vigour, we may endeavour to evince as little prejudice as our neighbours in our inquiry into the merits of that principle, which constructively has done its part to invest their newly-erected buildings with stability and refinement worthy of the age.

The Chairman, Mr. G. Godwin, Fellow, observed that the questions of weight and expense were among the most important in reference to the construction of iron floors; and it would be desirable to compare the method described by Mr. Burnell with similar plans which had been adopted in England. Mr. Hosking, in his book on "Building in Towns," had described a another method of flooring used in Paris, consisting of wood and plaster, and some floors upon a similar principle had, he believed, been constructed at Messrs. Clowes's printing-office, and had been found to answer exceedingly well.

Mr. Fowler, Fellow, inquired what was the effect of weights on the floors described in reference to elasticity. Although doubtless strong, the joists were apparently slight; and he wished to know whether any particular deflection might take place, in the case of persons dancing on such floors.

Mr. Burnell stated that the *Revue Generale de l'Architecture* gave the following experiment made upon a floor 16 feet span (*système Vaux*), the joists being 5½ in. deep, ⅝ in. thick, and cambered 2 in. in the 16 feet. Upon the grouting being filled in, the camber was reduced to 1¼ in.: upon the floor being loaded with 1,000 lb. per yard super. it was reduced to 1⅛ in. and after forty-eight hours' pressure again decreased to 1 in. the deflection from the load being ¼ in.: the weight being removed, the floor resumed a camber of 1⅛, having lost ⅛ in the experiment. When filled in with pottery, these floors were lighter, but the filling in with solid plaster formed the whole, in his opinion, into a stronger and more solid mass.

Mr. G. R. Burnell, C.E. referred to a paper read by himself at the Institute in 1849, in which he had alluded to Vaux's system. Since that time several works had been published on the subject,—the most recent and the best being one by General Morin, who in the fourth volume of his "*Cours de Construction*" gave an elaborate set of experiments on the resistance of these floors, and the formula on which their thickness and general dimensions might be calculated. From these experiments it appeared that a floor of 26 feet span showed a deflection of 7 centimetres, with a weight of 70 lb. on the square foot, in addition to the weight of the floor itself. It appeared to him (Mr. Burnell) that one of the great objections to the modern French system of filling in with plaster, was not so much the weight as the expansive action of the plaster. In practice the effect of this was to bring the floor down nearly half the amount of deflection, produced by the extreme load which the floor would bear. The use of pottery was therefore preferable, and it would be especially so in this country, where plaster of Paris was comparatively expensive. The conflagrations which had lately occurred in the city rendered it important to devise some incombustible flooring; and it was to be much regretted that in England insurance from fire was a tenant's tax, instead of being a landlord's tax, as in France, because there was no inducement to builders and landlords in this country to construct fire-proof houses.

The Chairman thought our system of *short leases* was rather the cause of the construction of houses to burn than the circumstance mentioned.

Mr. Papworth, Fellow, referred to a house in Hinde-street, Manchester-square, built by Dr. Gillies, the Scottish historian, the roof of which was made of cast-iron bars, little more than 4½ inches deep, with a sufficient flange, and filled in with flower-pots, precisely as in the French method, but cambered so as to form a vault. This had always stood exceedingly well until the walls began to settle: there was then a fracture which had caused considerable trouble; but that had been remedied, and the roof still stood very well indeed. With respect to the expansion of the plaster, mentioned by Mr. G. R. Burnell, he could not understand why it should press downwards, when there was no abutment above to prevent it expanding in an upward direction.

Mr. Fowler observed that it had an abutment above, being turned up against the joist, in a form equivalent to a curve; and, therefore, if expansion did take place, it must press downwards.

Mr. Piper, visitor, stated that the plaster would expand in all directions. The floor at Messrs. Clowes's warehouse, referred to by the chairman, was of the ordinary construction, with timber joists; but a plaster of Paris ceiling was attached to it, or a sort of flat centering was fixed and secured below the joists, and the plaster was filled in from above the laths; the laths being of oak, and stronger than usual, both in material and scantling, and placed at a wider interval. The plaster therefore passed through and formed the ceiling below and a sort of pugging above: it consisted of two parts of sand to one of plaster. The floor was constructed of three courses of plain tiles, in order to make it a perfectly fire-proof and air-proof chamber, used as a drying-room: no bad effects had arisen from the expansion of the plaster. With reference to the use of cast iron in floors, he had had great experience in those constructed on Fox and Barrett's principle; and it had always occurred to him that cast iron was an unsound material to be subjected to a permanent set, and to be strained as a floor was liable to be: and therefore the introduction of rolled iron joists, which were produced so successfully at the Butterley Works, was a great advantage. Six floors had been constructed with cast-iron joists in the Albert Buildings, Spitalfields; and at the top of the building a defective joist broke, and fell down vertically, striking out one joist in every floor as it fell, without disturbing the rest—an illustration of the extreme brittleness of the material. Regarding the concrete as an addition to the weight without being any addition to the strength, or having any natural cohesion or connection with the iron, he had not been prepared to expect a very firm floor as the result of the combination, in a span of 18 to 20 feet, in a coach manufactory in Regent-street; but, on the contrary, he was surprised to find that when the mass became set, it was rigid to an extraordinary extent, forming a kind of uniform landing, in which there was a good brotherhood between the concrete and the iron, the whole forming a trustworthy mass. With regard to the cost, his experience had shown him that in Messrs. Fox and Barrett's construction it was equal to that of an ordinary floor, with the addition of the price of the floor boards; but the present state of the iron market would somewhat interfere with that calculation. From the actual rigidity to which he had referred, he was disposed to think the French floors described would have a great amount of strength. Alluding generally to the facilities for the spread of fire in houses, by means of skirtings, staircases, quarter partitions, and roofs, as at present constructed, he illustrated the power of an ordinary plaster ceiling to resist the action of fire, by referring to a severe fire on his own premises, which began in the shop, and spreading upwards by the staircase ignited the roof, and then burnt downwards. The first-floor was, however, left entirely perfect, and the second nearly so; the only obstacle to the fire reaching them being the plaster ceiling of the ground-floor, where the fire commenced.

Mr. Barrett, visitor, said that, from the remarks made this evening, he was more convinced than ever that the use of iron in the construction of floors was only a question of time. With regard to these French floors, their liability to deflection was a radical defect, as no finished floor ought to be liable to the slightest deflection or want of rigidity. The system described could moreover prevail only where plaster was abundant—as in Derbyshire, Leicestershire, Nottinghamshire. Objections were also raised to plaster on the ground of its imparting a disagreeable smell, and of its tendency to swell. He had adopted rolled iron in his own method in consequence of the prejudice against cast-iron joists, and he proceeded upon this safe principle;—that, taking the concrete as so much dead weight, his joists were so proportioned that that dead weight, together with the extreme load which could subsequently come upon the floor, should not exceed the elastic limit of the iron. He used rolled iron joists for spaces not exceeding 24 feet. On reference to the table of weights used in Paris, he found that the French floors had not more than half the strength of his own: thus, with a bearing of from 16 feet 6 inches to 20 feet, the French used a weight of iron of 510 lbs. per square, whereas he should use 8 cwt. in addition to the difference in the weight of the grouting; and therefore, if the French floors were safe with 5 cwt. of iron, his floors must be more than safe with 8 cwt.; and

the cost of the latter, in joists only 18 inches to 2 feet apart, as compared with a timber floor, was about 7 to 10 per cent. additional. The thickness of concrete, on his plan, in a floor of 20 feet span, would be 7 inches from the flange of the joint, the whole substance being 12 inches thick, including 2 inches for the floor itself; and as a question of expense, it would be very easy to reduce the strength of the iron (and with perfect safety), so as to bring down the cost to that of an ordinary timber pugged floor.

Mr. C. H. Smith, visitor, stated, for the consideration of the members, the fact that no material could be more destructive to iron, especially wrought iron, than plaster of Paris. The girders might be coated with some material to protect them, but in moving them about it was liable to be chipped off; and if the smallest pinhole were exposed to the plaster of Paris, the iron would be corroded. On the contrary, lime tended to preserve iron; and therefore a coating of 2½ inches of ordinary mortar next to the girders, before using the plaster of Paris, might be desirable.

The Chairman, observing that it was impossible to overrate the importance of the subject, suggested an adjournment of the discussion, in order to elicit the careful and deliberate opinions of the members, rather than their hasty and unconsidered observations; and the meeting was accordingly adjourned to the 23rd inst.

LIGHT IN ROME.

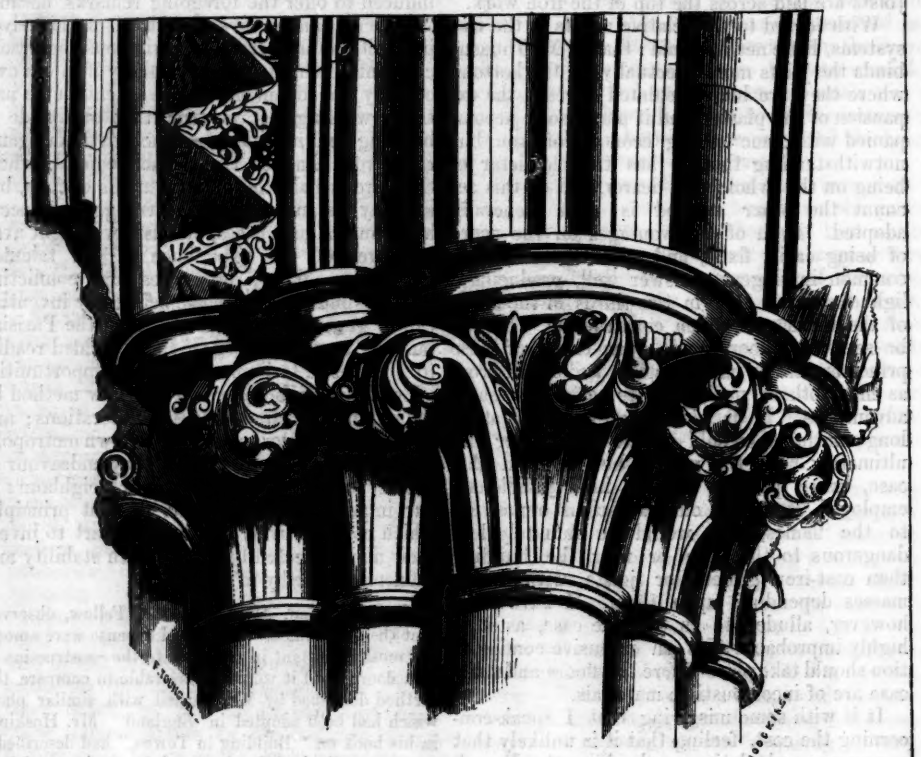
THROUGH the energy, skill, and capital, of some of our countrymen, fine gasworks have been erected in Rome, as we mentioned some time ago, and on the first day of the new year some of the principal streets were illuminated, to the great satisfaction of a multitude of persons of all ranks who filled them. The *Giornale di Roma* congratulates the municipality on the great advantage which has been conferred by the company on the city, and especially praises the ability and devotion of the engineer, Mr. James Shepherd, under whom the works have been executed. We happen to know something of the difficulties which have been surmounted, and cannot sufficiently admire and applaud the indomitable perseverance with which Mr. Shepherd has laboured through them. The history of the affair, and of the intrigues with which it was opposed, would form a curious and instructive story.

PROPOSED ROAD BETWEEN BROMPTON AND HYDE-PARK.

WITH your permission, I cannot allow an assertion of Mr. Elger, quoted in your journal of Saturday last, to pass uncontradicted. That gentleman states that the object in question, viz. the opening of a communication between Brompton and the Kensington-road, is one "which no parties resident in Brompton could have contemplated when purchasing property there, and, indeed, which could not have been effected but for the manner in which I have arranged my building operations on the Kingston House estate."

To ordinary capacities, it must be self-evident that the builder of Brompton-square, in leaving uncovered the plot of ground at the north end, could have had no other object in view than that it should afford a means of communication between his own and Lord Listowel's estate, and through the latter to the Kensington-road. But what I wish particularly to refute is Mr. Elger's assumption that no purchasers of property in Brompton could have been endowed with the small degree of foresight requisite to perceive that even if any lessee of the Kingston House estate should pertinaciously resist the opening of a direct communication between Brompton and Hyde-park, as Mr. Elger has done for several years (except on the receipt of an exorbitant consideration,—so large, indeed, that he himself imformed me, after finding there was no chance of its being offered, that he *intended* it to be almost prohibitory), Parliament would ever reject an application for giving to an important and populous district like that of Brompton, direct access to Hyde-park and Kensington-gardens. If the Legislature were to do so, it would *pro tanto* stultify its general efforts to improve the sanitary condition of the metropolis and its suburbs. For my own part, as a purchaser of houses in Brompton-square in the year 1842, I can aver that I bought that property on the express understanding that an opening into the Kensington-road would in all probability, at no distant period, be effected; and a plan was actually exhibited by the vendor to myself and three other purchasers with whom I am acquainted, defining a road through the Kensington estate precisely similar to that which Mr. Elger has made. Certainly he may safely assert that we could have known nothing of the details of his subsequent "building operations," or that after the lapse of a few years he would erect a particular row of houses, which he has designated Prince's-terrace, and *that* we care little about; but what we solicit of Parliament is, that whereas a public road exists, maintained at parochial cost, and reaching to the very edge of the Brompton district, the inhabitants of that district should not be capriciously debarred from passing over that road, as being the only short and convenient line of access to the Kensington-road, Hyde-park, and Kensington-gardens, which are as much the property of the inhabitants of Brompton, as they are of Mr. Elger or the twenty families resident in Prince's-terrace, some of whom, I am happy to say, have petitioned Parliament to grant the thoroughfare. * * *

Rutland-gate. DAVID ROBINSON.



EARLY ENGLISH CAPITALS: STONE CHURCH.

WESTWELL CHURCH, KENT.

IN the early spring of 1848 the writer of this article commenced a series of notes of the ancient churches of Kent: since that time he has visited nearly 300 of these interesting structures.

As a matter of course, in so large a number, very many have been found that have hardly repaid the trouble taken on their account, while on the other hand there have been some that would amply compensate for any disappointment. Among them is the church at Westwell, of which the accompanying engraving gives an illustration. The village, of which the church forms the principal feature, is situated about three miles from Ashford, and therefore is easily to be reached in these days of rapid travelling. The exterior has but little to recommend it, but the interior is not to be equalled by any church in the county. It consists of a chancel, nave, and aisles: the general style is the Geometrical. The whole of the work is very excellent, but the part that most merits attention is the chancel. As will be seen, the division between that and the nave is formed by a sort of stone screen composed of trefoiled arches on very slender and lofty shafts; between these shafts, the wood screen once stood,—a small portion of it still remains, which has been carefully covered over with carpet and baize, for the comfort of the occupants of the next pews. There are also a few of the old stalls remaining, but in a very sad state—indeed, this is the case with the whole church. With the exception of the church of St. Cross, it would be difficult to find a more liberal supply of whitewash than has been lavished on this fine chancel; nor is this the worst—very much substantial repair is required. The neighbouring church of Eastwell has been restored at the cost of the Earl of Winchelsea; surely this far more interesting and valuable specimen might meet with like treatment at the hands of Sir Richard Tufton, who takes the great tithes.

There are others of the Kentish churches with beautiful interiors, such as Hythe and Wood churches, and of these and others we hope at some future time to give an account.

We give now, a representation of some of the beautiful early English capitals in Stone Church.

W. C.

AGE OF THE DOORWAY OF KILLESHIN CHURCH.

IN the observations which accompany the very beautiful elevation of the ancient doorway of Killeshin Church, from the accurate pencil of Mr. Johnston, that gentleman alludes to the imperfect inscription running along the abacus of the impost, and supposes it to be some Scripture text. So far as legible, however, it appears to commemorate the erection of the doorway, if not of the church. It is in Irish capital letters, and may be translated thus:—

A PRAYER FOR ART, KING OF LEINSTER . . . FOR THE ARCHINDECH . . . . LENA . . . . FOR THE CHIEF OF UI-DUACH.

In the present mutilated state of the inscription, it is impossible to fix the exact date, or to ascertain the king of Leinster to whom it refers: unfortunately, the name of the *Archindech*, or prior of the church, is also deficient. One thing, however, the inscription renders certain, viz. that the doorway was erected previously to the Anglo-Norman invasion.

JAMES GRAVES.

HARDENING OF ENGLISH CAST-STEEL FOR CUTLERY.—August Kieser, of Issny, in Switzerland, prepares sharp instruments from English cast-steel, by immersing the blades at a dark cherry-red heat, into a bath composed of four parts of finely-powdered yellow resin, two parts of fish oil, to which is added, in a very hot state, one part of melted tallow, and allowing them to cool perfectly; after which they are heated without wiping them, and hardened in water in the ordinary way. The blades hardened by this process, according to the *Gewerheblatt aus Wurtemberg*, are more uniformly done than by any other method; at the same time that they are not too much so, or the metal too brittle.

CHANCEL OF WESTWELL CHURCH, KENT.

"DESIGNS ON THE BRITISH MUSEUM."

INTERESTED in maintaining the honour of the architectural profession, we were somewhat startled by a smartly-written article under the above heading in the *Athenæum* of last week, which seemed to impute a "would-be job" to Sir Charles Barry, and led us to suppose that he had been intruding on the ground occupied by a professional brother, and issuing uncalled-for suggestions for the knocking about of the British Museum. We were led in consequence to make some inquiries, and find that the facts are simply these: that the demand for increased space in the library department being renewed to the Treasury, the latter office referred to the Woods and Forests Mr. Panizzi's proposal to erect a building in the quadrangle as a reading-room, and an article in the *Quarterly Review* of December, 1852, for a report. The Commissioners of Woods in their turn forwarded these documents to Sir Charles Barry, and requested him to report on them, and also to give his own opinion as to "the most economical and effective mode of providing the requisite increase of accommodation for the library as well as for meeting the wants of other departments of that institution, with reference to the probable additions that will be annually made to them."

With the concurrence of Mr. Smirke, Sir Charles Barry undertook the inquiry and made his report. The purport of his recommendation is, that the inner quadrangle should be covered with a glass roof, to form a Hall of Antiquities; and that such alterations should be made in the interior as would admit of appropriating a *separate story* to each department, the principal floor being reserved for the library department; the reading-room to be at the north side, and the Egyptian Gallery to be converted to an ornamental library. Accommodation, the report states, could be provided for thirty years' increase in each department; and the cost of the whole is calculated at 105,000*l*. It was further urged that the property surrounding the Museum on the east, west, and north sides should be purchased for the time to come.

Without adopting or discussing these recommendations, which involve to some extent a consideration of the proposed *new institution at Kensington*, a fact which probably gave a fillip to our contemporary's indignation, we think it but justice to Sir Charles Barry to say exactly what it is he has done.

PROVINCIAL NEWS.

Lynn.—The town council here having passed a resolution recommending that a poll be taken to decide whether a rate should be laid for the erection of public baths and washhouses, at a cost not exceeding 3,000*l*. a public meeting has been held, at which it has been decided that a poll be forthwith taken for the purpose.

Northwood.—On the 5th inst. a new church was consecrated at Northwood, in the parish of Ruislip, near Watford. The edifice has been built by subscription: Lord Robert Grosvenor, the patron, has given the ground and endowed it. The church, which is intended to accommodate 300 persons in nave and chancel, is in the Early Decorated style, from designs by Mr. Teulon, and has a tower, shingle spire, and five stained-glass windows.

Speenhamland (Berks).—A new parsonage-house is about to be built here for the use of the incumbent of the district, from designs by Mr. G. E. Street. The work is estimated at 1,240*l*.; and Mr. W. Low, of Speen, is the contractor.

East Lockinge.—The church of All Saints, at East Lockinge, Berks, was reopened on Sunday before last. The building has been thoroughly restored and refitted under the superintendence of Mr. Street. Messrs. Fisher, Oxford, contractors.

Bristol.—Lord Palmerston has ordered the city authorities to erect a new lunatic asylum, the Commissioners of Lunacy having reported to him that the present asylum is wholly inadequate. A meeting of council was held on Tuesday week, to consider the letter, and estimates were laid before it, showing that the sum requisite will be about 45,000*l*. It was determined to adjourn for a fortnight; and meantime, the order of the Home Secretary is to be circulated among the citizens.

Plymouth.—The Plymouth new workhouse was formally opened on Tuesday before last. It is conveniently situated at North-hill, near the new prison, and was commenced in April, 1852. The total cost of its erection and fittings-up amounts to about 10,300*l*. The front building is appropriated to the offices and board-room. Behind this and forming the centre of the establishment, is the building for the poor, capable of accommodating 700 inmates. Attached to this is a dining-hall and chapel, 60 feet by 30 feet. At the back of the dining-hall is the kitchen. The other principal buildings consist of hospital, and hospital buildings, including lunatic and fever wards, &c. There is also a separate building appropriated to married aged couples. The front building is 250 feet long, and the whole establishment covers nearly four acres of ground.

Burslem.— The demolition of the old Town-hall, which is to be replaced by the new and more spacious erection, has been commenced. One of the men, in removing the vane from the cupola, slipped and fell upon the roof, but fortunately suffered only a very slight injury.

Chester.—The present theatre in this city (which, by the way, belongs to the Ecclesiastical Commissioners), is to be converted into a music-hall, which will accommodate an audience of 1,400, and an orchestra of 300 performers. It is proposed to raise the sum required for the alterations (3,000*l*.) in 5*l*. shares.

Liverpool.— A discussion took place at a meeting of the Health Committee last week, as reported in the local *Journal*, on the dangerous state of many warehouses, which were frequently over-loaded, and on the necessity of more summary power to insure the public safety than as yet exists. Mr. Rishton said that, had they succeeded in carrying the Building Act, there would have been summary power: he was satisfied that unless they got some power as to the loading of bonded warehouses, the consequences would be very serious indeed; and Mr. Gladstone hoped this remark would arrest attention through the press.

Stanley.—Three windows have been just put up in the chancel of St. Ann's Church, Stanley, near Liverpool. A painting of the Ascension fills the centre window: seven figures are introduced, on a deep blue ground. The two side windows are occupied by life-size figures of St. Peter and St. Paul, each bearing their respective emblems. Below St. Peter are introduced in an ornamental compartment the family arms of Mr. Preston: below St. Paul, in a similar compartment, are the armorial bearings of the Rev. Mr. Gardner, the incumbent. Each window is surrounded with a border. Messrs. Pilkington, of St. Helen's, designed and executed the windows, which are the gift of Mary Ellen, George Theophilus Robert, and Margaret Jeannette, children of William and Margaret Preston, of Rock House, West Derby.

Rochdale.—At Blue Pits, a mutual improvement institution has been established, and a new building has been opened, dedicated to its uses. The building is one story high, containing three rooms decorated.

Blackburn.—The Master Bricklayers' Society held their annual meeting at the King's Head Inn, on Monday in last week, when about forty masters sat down to "a sumptuous dinner, replete with all the delicacies of the season. After dinner, the company having been joined by their wives, dancing was kept up till a late hour."——The contractors for the erection of the New Bull Hotel, Messrs. Baron and Sons, gave a "rearing" dinner, on Thursday in last week, to the workmen employed, when about 140 were present.

Preston.—On removing a quantity of sand and bricks from the cellar of the old Cockpit, or Temperance Hall, which belongs to the Earl of Derby, the foundation sank considerably, and the front wall of the building was rent to a dangerous extent, threatening the demolition of the whole structure, especially as an extensive fissure before existed in the back wall also. A crowd of poor factory operatives had occupied the building, and separated just previous to the accident, otherwise there might have been a repetition of a recent catastrophe of a similar kind.

Barnsley.—A new national school is about to be erected, at a cost of about 400*l*. at Hoyle Mill, near this town.

Doncaster. — Instead of the donation of 1,000*l*. originally offered by Mr. W. Forman, of Pipbrook House, near Dorking, some of whose ancestors are buried in the south-east chapel of the parish church, he has now proposed to take upon himself the entire restoration of that chapel, on a plan more highly decorated than the rest of the church, and involving an expense of more than double his former offer. The lessees of the great tithes are bound to restore the adjacent chancel. Mr. Scott's surveyor worked out the details of the estimate of 2,500*l*. which he furnished to them last July, to a still higher sum, merely for rebuilding the chancel as it was before, but without the screen and the painted window, put in by a former lessee, but which the present lessees refuse to restore, and not including architect's commission. The tithe-owners, however, only offer to pay 2,100*l*. in full of all liability; and rather than risk their spoiling the whole work by rebuilding the chancel themselves without regard to Mr. Scott's plans, which their trustee threatened, the committee have accepted the offer.

Hartlepool.—The new ferry at Hartlepool has been put into operation. The landing-places are formed by extensive piers on both sides of the harbour, facing directly into it, and will, it is feared, be much exposed in heavy weather. The collector's lodge is furnished with a check style on the principle of that at the Thames Tunnel, which registers the number of passengers.

Sunderland.—Reports of a somewhat alarming nature, in regard to further appearances of insecurity having shown themselves at the west side of the south abutment of Wearmouth-bridge, have been prevalent; but Mr. Moore, the engineer of the bridge, reports to the council that a settlement of the flagging at the north-west corner of the terrace adjoining the bridge-house, is only what might have been expected under existing circumstances.

Gateshead.—A spectator thus describes, in the *Gateshead Observer*, some electrical phenomena observed during the late snow-storm. "The chimney of the chemical manufactories here is above 200 feet high, and is surmounted by a massive stone coping, the top course of which is secured by a metallic ring communicating with the lightning-conductor. At the commencement of the storm, this ring, which is about 24 feet in circumference, was perceived to exhibit a multitude of short bluish pencils of electric light. These gradually increased, in sparks or flashes, apparently 5 or 6 feet long, accompanied by sharp reports, increasing in violence to a certain point, when suddenly the whole of the top of the chimney became immersed in a mass of light of overpowering intensity, and at the same instant a sharp and terrific crash was heard, more like the explosion of some enormous quantity of detonating powder than the sound of thunder." Nevertheless no harm seems to have been done to the chimney, and the circumstance affords strong evidence of the protective power of the lightning-conductor, even though it were insisted that, in fact, the lightning was attracted to the chimney by the conductor.

Maryport.—The trustees for the town and harbour have decided on the construction of a wet-dock at the western end of the existing dry-dock. The works, which are expected to be completed in eighteen months, at a cost of 10,000*l*. are to be carried on under the direction of Mr. Rendel. This activity, says the *Carlisle Journal*, is the result of the Silloth Bay movement.

Glasgow.—The opening of Victoria-bridge took place on Monday in week before last, in presence of an immense concourse of people, and was followed up by a convivial meeting in the City and County Buildings, the Lord Provost in the chair, when his lordship, in his address, expatiated on the advantages of building wide, spacious, and level bridges. "The city of Glasgow," he added, "could boast of two bridges the widest in Britain—each 60 feet over the parapets. The next widest was London-bridge, being 53 feet; the next, Westminster, 48 feet; the next, Waterloo, 42 feet; and the

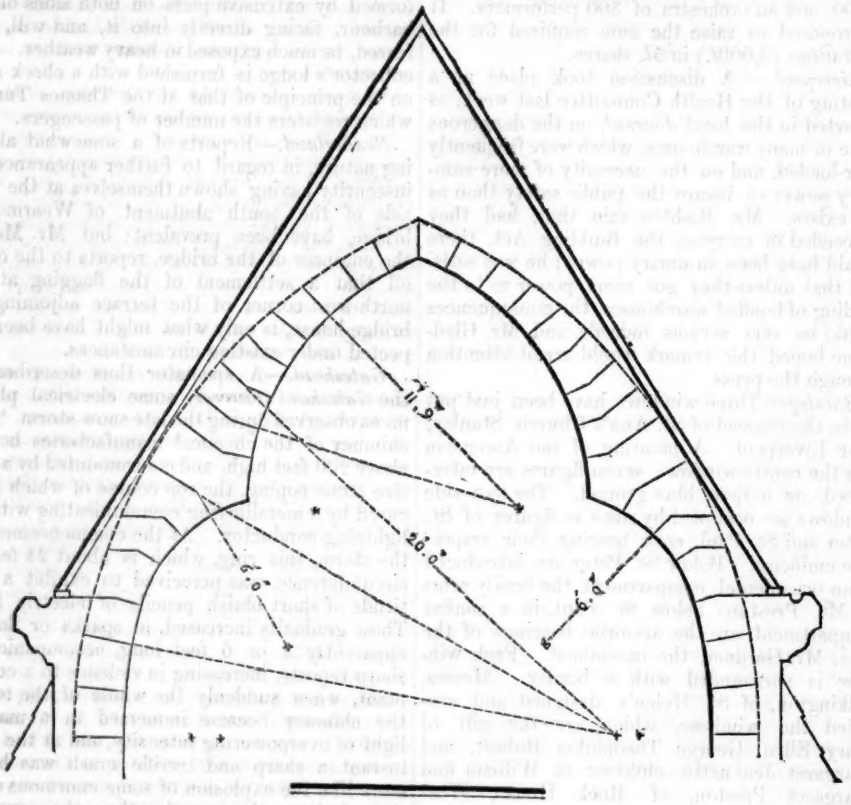
next, Southwark, 42 feet. The citizens of Glasgow had reason to be proud of their bridges. In addition to the new and elegant structure which had been opened this day, they had Glasgow-bridge, which was built to replace one begun in 1768, and opened this day eighteen years. In 1829 Hutcheson's Bridge was opened." His lordship regretted that at the opening of Victoria-bridge he was only able to say, "Open to her Majesty's lieges in terms of Act of Parliament;" for his desire was, that all their bridges should be free. He trusted, however, that arrangements would be concluded before the expiry of the present year, which would enable him to announce the gratifying fact. The usual compliments were paid to Dr. Walker, the engineer, and to Mr. York, the contractor, and his son, Mr. James York.

STONE ARCH, BRUEN TESTIMONIAL CHURCH, CARLOW.

AT the Bruen Testimonial Church, now building in Carlow, under Mr. J. Derick, architect, two granite arches have been erected over the chancel which have excited some attention. According to the local *Sentinel*, "the architect's difficulty was this:—a simple arch was impossible without a greater counterfort than he could give to it, as he could not avail himself of pinnacles over buttresses, the building having been commenced and carried up with a view to support ornamental oak trusses in the usual way, these requiring little counterfort as compared with arches of stone, as each arch weighs about 22 tons. The difficulty of finding materials for the oak trusses prompted the architect to avail himself of the material at hand—the Carlow granite—and to adopt an entirely new principle in constructive arches of large span, where great counterfort could not be given. The principle consists in the connection of a trefoiled arch within a simple lancet arch, the radiation of the voussoirs being to the centres of the several curves. The voussoirs which compose the trefoil being common to those composing the lancet, and the trefoiled arch exercising a force within the building which neutralises the outward thrusting force of the lancet arch, the two forces produce a state of rest."

The real principle, however, will be better understood from the annexed diagram, with which we have been favoured by a correspondent.

Without desiring to lessen the praise given to the architect, we may remark that the object of this arrangement is met to a certain extent by every foliated arch: the structural requirement indeed probably produced the form.



ARCHITECTURE:

ITS RELATIONS TO NATURE AND THE INTELLECT.

A LECTURE on the above subject was delivered at the Institution, Avenham, a few evenings ago, by our contributor, Mr. Huggins, of Liverpool. After some preliminary remarks, the lecturer observed that architecture was based on external nature, and on the powers, physical and mental, of man,—as much on external nature as consisted with the due exercise of human intellect,—and was an intellectual rendering of the forms around us. Nature, in the material universe, presented us with no literal model, but she gave us *principles* of construction for observance in the erection of our edifices, which were therefore built as nature would build them for the same purpose: we gathered how she *would* build ours by observing how she *did* build her own. While the affinities of the solid walls of our edifices were with the arrangement of inert matter in the quarry, there were yet various parts, as framed floors, partitions, and roofs, cradling for curved ceilings, &c., which followed the example of organic nature shown in the animal frame: of these the flooring boards, the slates, the outer and inner coating of plaster or cement, were the integument skin of the skeleton, which was strikingly imitative of nature in her organic productions. There were materials, as metals, from which probably an entire system of architecture of other affinities might be derived: wood had capacities for form superior to stone, but was weak and combustible: metal was free from these objections, and was susceptible, from its peculiar strength, tenacity, and flexibility, of effects more emulative of the landscape—more suggestive of the charms of grove and thicket than masonry could pretend to. The forms and proportions he educed from nature, the architect was capable of applying according to different circumstances, in which operations invention might be said to consist. Elements gathered from various and distant departments, kingdoms, or families of creation, were, before being embodied in stone, so variously distributed in his imagination, under the laws of intellect, that in the higher works, as those of the Greeks, the resemblance was only perceived by subtle thought, kindred to that of the designer himself. But into these forms and combinations nothing could enter that had not its origin in nature; and even in the minutest divisions and subdivisions of architectural form, down to *finish* and texture, nature had been the prompter. Indeed, decoration *proper* was chiefly obtained from direct imitation of natural foliage and flowers, fruits and shells, as without direct imitation we could not have the perfection of beautiful form: those images of beauty that delighted us in our temples and palaces, our halls and mansions, were derived from organic life, from the leaves and flowers of the field, through all the various tribes of animals, up to man himself; and the highest object of architectural decoration imitated from nature was the human figure; for when the Greeks and medievalists essayed to go farther, and embellish with gods or angels their pediments and niches, nature was still their type and source: the Greek divinities were the apotheosis of mortal beauty; and in the Middle Ages angels were human figures, with the wings of the peacock or eagle, or, in the case of evil ones, of the bat. Nor was this obligation to nature which he had endeavoured to trace an after-thought of architecture,—the result of advancement and civilization: the infancy of every true style of art betrayed its origin from nature, which was resorted to in the very first structures designed on æsthetic principles: in the tabernacle of the Israelites, erected in the wilderness, the pattern of the furniture was from vegetation. The golden candlestick, "branching like the almond tree," was adorned with flowers and knops. Some of the richest and most beautiful of the ornaments of Solomon's Temple were imitated from the palm and the pomegranate: "Upon the tops of the pillars was lilywork: the brim was wrought with flowers of lilies." The lotus was probably the type of the first Egyptian column. The so-called Corinthian capital evidently originated (on the banks of the Nile) in the shape of bells of flowers, which became decorated with leaves and stems of the reed and palm. The lotus in its different stages of bud, bloom, and blossom, was also profusely employed as an element of decoration in the Egyptian temples, where flower and foliage decoration clung round the bases of their columns, like living plants. Of Indian architecture, much the same might be said. Among many whimsical elements, the results of their superstition, we found floral sculpture, representations of men and animals, employed in decoration. The temples of Genesa were profusely ornamented with carvings and paintings of the different limbs of the elephant, but most frequently of the head, repetitions of which often formed the ornamental design of the cornice and pillars, where it was most successfully employed in carrying out the expression of mystery sought to be conveyed. In the works of the more refined Greek we found but a more refined application of nature's lore. The Greeks followed the example of the Egyptians in selecting their ornaments from the plants of their own country. They adopted the foliaged capital of the Egyptians, and in its further improvement were guided by natural objects and forms: they added the acanthus and the tendril-like volutes, and on their friezes, architraves, columns, and soffits, they sculptured leaves, berries, flowers, roses, palms, heads of victims, and busts: nearly all the attributes and emblems employed by them to give expression to their temples, were from natural objects, flowers, or animals. In the Ionic capital they adopted the spiral line of shells and horns for a volute: the ovolo they so largely employed is a natural curve. As to the Greek shaft flutings, he believed they were not the symbol of the bark of the tree, but an imitation of natural reedings or flutings of stalks, &c. In conclusion, Mr. Huggins glanced at the error of architects in neglecting the fountain of wisdom thus open to them in nature. Its professors had imitated the old masters rather than the old mistress, and sacrificed the interest of art at the shrine of precedent. The prevalent notions on the subject of architecture were in consequence far from the truth. According to these architecture was a mere name—a glory long since past—a thing dead both to the realities of the present and the hopes of the future. But if architecture had the living and infinite relations for which he contended, it must be something more than this. He defined architecture "the spirit of beauty in building." It was the essence that was to pervade the work, whatever the proposed plan, whatever the material of its construction. It was no re-

specter of materials or modes of structure, nor was it confined to one type of form or class of building; it would inhabit the simple oratory or auditorium no less than the aisled and vaulted cathedral.

NOTES AND INQUIRIES.

ARCHITECTURAL AND ARTISTICAL.

Sound.—In reply to your correspondent (page 6), who wishes to be informed of a covering to a partition to prevent sound, I know of nothing better for the purpose, with the advantage that it adds little to the thickness and is inexpensive, than Croggon's asphaltic felt. As a precaution against vermin, if the partition is or is likely to be infested, wash it well with a solution of the corrosive sublimate of mercury, which may be had of most chemists, but should be used with caution, being a powerful poison. When dry, attach the felt, which may be papered or coloured over. T.

"A." inquires on the subject of a non-conductor of little weight for preventing sound from passing through a boarded partition, or one of lath and plaster. One of the most effective modes for effecting this object is by filling in the quarterings of the partition with sawdust, moss, or similar materials. It is necessary to consider ventilation, and to guard against the dry rot. This is important in the construction of houses; for it is known that the best measures for preventing the spread of sound are equally effective in preventing the spread of fire. In 1838, Messrs. Borrodaile and Co. manufactured a felt as *pugging* for deafening sound, either between the joists of stories or in partitions. F. L.

Flues.—I perfectly coincide with your other correspondent (page 6); but if Stourbridge clay pipes were allowed to be used they possess decided advantages, particularly in random rubble walls, and will in most cases ensure a free and uninterrupted draught, are a great security against fire, and easily swept by the machine brush, the joints being filled with pargetting. T.

Notices of Books.

The Laws of Artistic Copyright, and their Defects. By D. ROBERTON BLAINE, Esq. of the Middle Temple, Barrister-at-Law. Murray, Albermarle-street. 1853.

To artists, sculptors, engravers, printsellers, &c. this little volume will be found to be very essential. Such a treatise was much needed, as it appears that so little knowledge prevails amongst artists themselves of the actual conditions under which their works become copyright, that it is doubted whether the copyright be really acquired or retained in more than *one* out of every hundred works of sculpture, for instance, produced in this country. Yet a good deal more has been done by the Legislature for their protection than they thus seem to have done for themselves. There are various Acts under which such protection is granted; nevertheless, farther legislation is very much needed, and the present author points out the defects of those Acts which are already in force, and suggests amendments and consolidation. Every requisite information is also given as to the law in its present state, and all that is necessary to keep to the right side of it, so that by aid of such a guide, every artist may know his rights, remedies, and the only proper mode of transferring such rights. In treating of the Sculpture Copyright Acts, for example, we find that if a sculptor be employed to make any new and original sculpture, the copyright vests in the employer, although that is not the case where the employer commissions the execution of a work already modelled by the sculptor. Neither in one nor other, however, will any such right be vested, except on condition "that before the work is put forth or published, the proprietors shall cause to be put thereon, first, their names; second, the date." The sculptor, therefore, can only claim copyright of a work of his own origination executed for an employer, where he has engraved on the *model*, as well as on every cast or copy, his names and the date, namely, the day of the month and year when the model is first shown or otherwise published in his studio or elsewhere, *and such date must never be altered;* whereas it is a popular and fatal error among sculptors to suppose that their names, and the year when the finished *copy* from the model is executed, are sufficient to engrave on such copy. And the law has a very good reason, too, for the stringency of its rule in this respect, since it is from this date alone that the public can know, legally speaking, when the copyright shall expire, or whether it has already expired. In order to have any right under the Copyright of Designs Act, moreover, the work must be registered under that Act, and the word "registered" marked upon it, and upon every copy or cast of it, together with the date of registration. In the transfer of copyright, too, there are fallacies in practice which ought to be avoided; but for this and much other valuable information, as well as for copies of the Acts relating to works of art, we must refer to the useful little treatise now before us.

British Classics: The Works of Oliver Goldsmith. Edited by PETER CUNNINGHAM, F.S.A. Vol. I. London: John Murray. 1854.

PROMISCUOUS and aimless reading is a characteristic of our time, and a great mistake. We step slightly out of our way to say this, because we feel that the error is a serious one, and its correction of the utmost consequence. A week never passes without bringing us inquiries for the names of books to read in hours of recreation. Compliance is of course out of the question, but we would here urge that class of our readers from whom these inquiries come, to master those works which have become part of our literature, before they seek to cope with the flood of new books, good, bad, and indifferent, which every month brings up. They may be none the better for reading the "Melancholy Milkmaid, or Midnight Murder made Manifest," and will incur no reproach by the omission, while they may feel sure of deriving pleasure and advantage from the works of Pope, Addison, Johnson, or Goldsmith, and will find themselves oddly situated in society if they do not know them. The remark is made of course to a very limited class.

The issue of a new edition of the standard classic authors of England has been commenced by Mr. Murray, and the volume named at the head of our notice is the first of the series. Besides the merit of cheapness, it is to have "the higher recommendation of a text purified from error, notes tending *bonâ fide* to elucidate the text without encumbering it, with the additional attractions of a beautiful and legible type, fine paper, compactness of bulk, and economy in price."

In addition to the works of the authors we have named, Gibbon's "Roman Empire," and the works of Dryden and Swift, are already announced.

The gentleman to whom the editorship of the volume now published and other works in the series has been confided, Mr. P. Cunningham, is peculiarly well fitted for the task: his studies have long been specially directed to the literature, manners, and people of the last century; and the large amount of minute information on these points which he possesses, conveyed as it will be by a practised pen, will tend to give great value to the edition. With respect to the notes in the volume before us, Mr. Cunningham says, "I hold myself responsible for all, although to the authorship of many I can lay no claim whatever. It was once my intention to distinguish those of previous editors by their names, but I abandoned that idea, because in many cases I was unable to identify the writers; while I had myself taken some liberties, either of correction or compression, with almost every note: I therefore resolved to adopt the notes of my predecessors with this general caution and admission, and to let my own appear without the often recurring ostentation of my name attached to them." This course, as it seems to us, exposes him to comment, and we would suggest to him the advisability of going back to his first intention, and distinguishing the notes of others by the initials of their authors.

The writer with whose works the series commences is one of our especial favourites, and we shall be anxious to see how Mr. Cunningham treats his biography. The life of "Poor Goldsmith," who touched nearly every style of writing, and lent a grace to everything he touched, is full of interest and instruction, teaching, amongst other things, that genius cannot always avert the evils of a defective early training, and that a man may be a lasting benefactor to his race, and the author of much sorrow to himself.

We welcome warmly the "British Classics," and recommend this edition to our readers.

Miscellanea.

SCENERY AT THE PRINCESS'S THEATRE.—Although great pressure on our space has prevented us from giving so much attention to the scenery of the Christmas pieces as we have at other times done, it would be unfair to those who produced what we are disposed to call the best pantomime of the season, not to point attention to "Harlequin Miller and His Men," which gives evidence throughout of the same careful watching and scrupulously tasteful direction, which make every thing produced here a success. The first scene, the Azure Lake (by J. Lloyds), is a charming piece of fairy architecture and landscape, but the great scene of the introduction is the Fire King's "Hall of Audience," painted by Gordon, and arranged by Mr. Oscar Byrn—the life, movement, dresses, and transformation (four men into one most flesh-like face), are all artistic in the highest degree. It is too late to say more, although there is much more might be said.

THE IRON TRADE.—All the quarterly meetings have passed without any change in the determination of the iron-masters to abide by current prices. Indeed, as remarked by the Wolverhampton trade correspondent of the *Morning Herald*,—"There is a very strong determination on the part of the leading members of the trade to check any further advance of prices: in fact, that could not be attempted without speedy injury to the trade." For all descriptions of iron—bars, hoops, sheets, and strips, and plates, the orders both for home and abroad are declared to be abundant, but buyers are cautious in regard to purchases as well as sellers, the latter of whom are said still to have enough to do with old orders. American orders are said to have been plentiful, and iron ship and house building in this country continue in an active state. One of the leading iron-masters (an employer with his partners of some 8,000 persons), states that the quantity of iron exported last year fell little short of 4,800,000 tons, which is about three times the amount altogether produced no longer since than 1825.——Letters from Vienna announce that a reduction in the Austrian duties, both on pig and railway iron, was to take effect from the 1st inst. The reduction in pig iron is to the extent of 10s. per ton; that is to say, from the existing rate of about 25s. to 15s.; while on rails it is to be 2*l.* per ton, or from 7*l.* to 5*l.*

INDUSTRIAL EDUCATION AT PADIHAM.—Sir James K. Shuttleworth, late Secretary to the Council of Education, being of opinion that the schools for primary instruction now working in Padiham and Habergham under the guidance of himself and other gentlemen, were insufficient for the requirements of the district, has conceived the idea of founding a school for children of the middle classes, where secondary instruction may be imparted, or, in other words, where they may learn a sufficiency of science and of art to make them useful as managers of manufactories, surveyors, and practical mechanics; and further, to enable them to reach, if possible, a higher grade of artistic and scientific excellence. With this view arrangements have been made, and a school has been opened in Padiham, to be self-supporting; although Sir James guarantees preliminary expenses. In order to give *éclat* to the opening, and to afford the people for whose benefit it is intended an opportunity of understanding his plan, Sir James invited about two hundred of the respectable middle classes of the neighbourhood to drink tea with him at Gawthorpe Hall. Dr. Lyon Playfair attended as a representative of the Department of Practical Science and Art, and took an active part in the proceedings. Some designs, illustrative of mechanics, prepared by the Department under the direction of Dr. Playfair, for the use of schools (to be supplied to such establishments at half price), were disposed about the walls of the hall where the *fête* was held. Sir James read an address two hours long, explanative of the objects in view, and the meeting was also addressed by Dr. Playfair, and other gentlemen. Business was interspersed with music as well as more physical enjoyments, and the company at length dispersed, evidently delighted with their combined entertainment and instruction.

THE PRESIDENT'S ADDRESS AT INSTITUTION OF CIVIL ENGINEERS.—On the 10th inst. Mr. James Simpson, on taking the chair for the first time after his election as president, made an address, in which he alluded to the difficulties formerly experienced by young engineers at the commencement of their career, chiefly from want of opportunity of contact with, and experience of, the proceedings of the older practitioners; contrasting it with their present freedom of communication with the seniors, at the meetings of the institution. He then gave a slight sketch of the professional career of his father, who entered the metropolis as a millwright in 1778, and before his decease had raised himself to eminence as a civil engineer, and was the coadjutor of Smeaton, Jessop, Watt, Rennie, Telford, and others. Under him Mr. James Simpson commenced his practical career, of which he gave a rapid outline. He then gave an account of the great engineering works in progress in India, Egypt, Sweden, Norway, Denmark, Canada, Australia, Cuba—on the European continent generally, and in Russia, chiefly under the direction of members of the institution. The maritime works on the Thames, the Tyne, the Severn, the Clyde, the Avon, &c.; the harbours and docks at Harwich, at Dover, at Guernsey, Jersey, Alderney, Portland, Holyhead, Plymouth, Leith, Hartlepool, and other places: the works at the Norfolk Estuary, the reconstruction of the Bishop's Rock Lighthouse, and other important labours of civil engineers, were also noticed. He also alluded to the subject of screw propulsion, and the hitherto unrewarded labours of Mr. F. P. Smith. A short history of the waterworks of the metropolis was given, to show that the extensions of filtering and high service had closely followed the facility for obtaining cast-iron pipes in large quantities and at a reasonable rate; and that the improvement in steam-engines and pumping machinery had also produced corresponding advantages. Attention was directed to the present state of the sewerage of cities and towns, and also that of the drainage of farm lands: for the former it was urged, that more had been done than was generally admitted, and for the latter, the partial steps hitherto taken were contended to be inefficient, unless the system was introduced on a larger scale, and extended to arterial and trunk drainage, and the improvement of the principal drains and water-courses in the low-lands.

RAILWAY MATTERS. — At a recent meeting of Liverpool merchants, a committee was appointed to urge the town council and dock committee to form a high-level line of railway along the line of docks.—— The Great Western have at length begun to pour in coals from South Wales and the Forest of Dean into the metropolis, which will shortly tend, it is hoped, to prevent the metropolitan public from being so unmercifully fleeced as they have of late been, and are still being, in the article coals. The new station of the Great Western at Paddington, was opened on the 16th inst. for passengers' departure trains.—— A new map of England and Wales, prepared under direction of Capt. Simmons, for the use of the Board of Trade, has just been presented to Parliament. The specific object of the publication is to show the railways, canals, and inland navigation of the country on a considerable scale. The compilation has been made from the Ordnance survey, of which indeed it is an epitome with regard to the three points to which it refers. —— The *Salut Public* of Lyons, says—"The works of the great railway station at Vaise are being urged on with great activity. The length of the central building will be 190 metres, with thirty-seven side arches, leading to the various buildings erected there. The roof is to be of zinc and glass, supported on cast-iron pillars. The front façade is to be in three compartments, all constructed with great magnificence." —— The self-acting signals are being adopted on French lines. *Galignani* speaks of an experiment made in presence of a commission on the Bordeaux to Teste railway. The invention consists of mechanisms placed on the external edge of the rails, and united together by an electrical wire, which gives the signal of the arrival of the train on a curve or in a tunnel. The apparatus may be established in such a manner as to act not only at a distance of 700 metres, but even 3,000 metres. The passage of a train on entering on a curve or on approaching a tunnel causes, by the pressure on the springs of the apparatus, the explosion of petards, which are heard at a great distance, and at same moment moves a coloured disc, which gives the signal to the approaching train to stop.

NEW BUILDINGS IN LIVERPOOL.—The following is a return, prepared by Mr. Rishton, the building-surveyor, of the dwelling-houses and warehouses erected, or in the course of erection, within the municipal borough of Liverpool, during the year 1853:—Under 12*l.* per annum, 52; from 12*l.* to 75*l.* 754; from 25*l.* to 35*l.* 79; from 35*l.* upwards, 39; total, 924. Warehouses, 3.

THE DARGAN INSTITUTE.—The committee of the proposed Dargan Institute, at a recent meeting, the Marquis of Westmeath in the chair, resolved that a building should be erected in Dublin as a Public Gallery for the Exhibition of Works of Art. The committee in their report explain that, for the proper carrying out of such an object, a building must be erected of such magnitude and style of architecture as shall be in harmony with the beauty and interest of its contents; that for this purpose, the funds already collected cannot be regarded as sufficient; and that a sum less than 10,000*l.* would not suffice for the erection of a building suitable as a testimonial of the practical patriotism of Mr. Dargan, and adapted for advancing the progress of Ireland in the most interesting branches of art and manufacture.

DWELLINGS OF AGRICULTURAL LABOURERS.—A very influential meeting was held last week in the Hopetoun Rooms, at Edinburgh, for the purpose of promoting the improvement of the dwellings, and by this means of the social condition, of agricultural labourers. The Duke of Buccleuch was voted to the chair, on the motion of the Duke of Hamilton. Among the gentlemen present were Lord Kintore, Lord Morton, Sir A. Hay, Sir Ralph Anstruther, General Lindsay, Sir J. Ogilvy, Sir J. S. Forbes, Sir Archibald I. Campbell, Sir J. D. Elphinstone, Sir Robert Arbuthnott, and many other land-owners, besides the Dean of Faculty, Professor Alison, &c.; and it was stated that letters approving of the object of the meeting had been received from the Duke of Sutherland, the Earl of Aberdeen, Lord Kinnaird, the Earl of Haddington, Lord Elibank, the Earl of Home, Lord Blantyre, Sir George Sinclair, Bart., Sir James Carnegie, Sir Thomas Gladstone, the Earl of Rosebery, Mr. John Fergus, M.P., Mr. J. Johnstone, M.P. &c. The Duke of Buccleuch addressed the meeting at considerable length, as did other gentlemen, and various appropriate resolutions in favour of the objects of the meeting were unanimously passed.

INDUSTRIAL FETE.—An interesting ceremony, called the *Fête de l'Industrie*, took place at Amiens, on Sunday before last; namely, the distribution of prizes to deserving workmen. The Bishops of Amiens and Perpignan, and the civil and military authorities were present, and the bureau was composed of the Prefect of the Somme as president, and the presidents of the Chambers of Commerce of Amiens and Abbeville, and the Mayor of Amiens. The prefect, in an appropriate speech, pointed out the object of the meeting. The council-general of the Somme, he said, had proposed the establishment of the *Fête de l'Industrie*, at which prizes were to be annually awarded to such workmen as were distinguished by their good conduct. The Emperor had graciously condescended to add 1,000f. to the sum appropriated by the department. After the speech of the prefect the different rewards were distributed. They consisted of medals and sums of money, varying from 60f. to 400f. which were paid in new gold pieces, bearing the effigy of Napoleon III. accompanied by a certificate bearing on the four corners, in large characters, the words—"Travail, Probité, Honneur, Devoir,"—as the principal virtues of an honest workman.

THE DALTON MEMORIAL, MANCHESTER.—A low monumental erection, designed by Mr. R. Lane, is to be placed over the grave of Dalton. It is about 10 feet long, 7 feet wide, and 3 feet in height; and is to be enclosed by an appropriate iron railing, leaving a space between it and the lower slab of the design of 5 feet 3 inches at each end, and of 7 feet on each side. The erection may be described as a low table tomb; but the upper surface is not flat, but slightly coped, and the centre of its ridge again is flatted by a long label, upon which is to be deeply cut the name, John Dalton. The base is a slab, slightly coped from the plinth; and a few simple mouldings carry the upper coped slab. The whole is to be of polished red Aberdeen granite. A bronze sitting statue is to be executed by Mr. Theed.

BALANCED CARTS, &c.—We not long since noted the invention of a wheelbarrow, in which the load was mainly balanced over the wheel. A Lyons journal reports something similar as to carts and other vehicles. A new plan it says has been invented, by which a horse can be made to draw a load one-half heavier than by carts as at present constructed. The new vehicle has four wheels, and when the horse is harnessed the foremost pair come to about the middle of his body. The weight is thrown on the axles, and the vehicle is constructed in such a way that part of it covers the horse up to the neck.

INSTITUTION OF CIVIL ENGINEERS OF IRELAND.—A general meeting of this institution was held in their new rooms, Sackville-street, on Tuesday, the 10th inst. the president in the chair. Mr. Robert J. Hampton was elected secretary, *vice* Mr. Fred. Villiers Clarendon, resigned, thanks being first voted to the latter gentleman for the manner in which he had discharged the duties of office for a number of years.

ST. ANDREW'S, ISLINGTON.—The new church in Thornhill-square, Islington, was consecrated on Monday. It is stated to be of the Decorated period, cruciform in plan, with tower and spire at west end of south aisle, and is built of Kentish Rag and Bath stone. The cost was 6,000*l.*: the architects were Messrs. Newman and Johnson. The design was obtained in a limited competition, when a much smaller sum, by the way, was named to the competitors to restrict them in their views. It may be worth while to inquire into this.

FRIGHTFUL ACCIDENT IN THE CITY.—During the operation of pulling down the range of buildings known as the Inland Revenue Office, in Old-Broad-street, a portion of them fell down, and buried the men in the ruins, killing two poor fellows, and injuring several others. It is supposed that the catastrophe took place either from overloading the floors with the bricks taken from the walls, or from some defect in the timbers, as it is asserted that none of the walls fell until the uppermost floor sank, and its additional weight settling upon the others caused them likewise to fall. A few weeks ago there was a fatal accident at the same place. At the inquest on the last occasion, Mr. John Shaw, official referee under the Metropolitan Buildings Act, said that he had no hesitation in stating that the main cause of the occurrence was the insertion of the binders into the girders. The binders ought not to have been let in so far. He found that there was likewise a horizontal split in the wood. The ends were all decayed, but not to any great extent. It did not occur to him that any blame was attributable to any person in not finding the fracture out before. If the girder had not been cut into in the manner it was, it would have been strong enough to bear twenty tons. He thought the practice of loading the floors with bricks injudicious. He never allowed it. The only fault, if any, rested with the persons who built the premises ninety years ago.

PROPOSED ERECTION OF NEW LAW COURTS.—Judging from the statement made by the Earl of Aberdeen a few days ago, to a deputation who attended him on this subject, the present government are favourable to the proposed erection of new Law Courts. The deputation stated that the proposed site for the new courts is between the Temple and Lincoln's-inn, in the centre of the metropolis and of the law district. It would consist of a quadrangle, about 700 feet by 480, in the centre of which the new courts and offices would be erected. The effect of clearing away the lanes and alleys within that area would be to widen the Strand and Fleet-street by 100 feet, Carey-street by 60 feet, and to unite them with the new street into the City of London from the Record Office, now in course of erection on the Roll's estate in Chancery-lane. The estimated cost of the building and site is 1,197,074*l.*—viz., cost of the site (about eight acres), 675,074*l.*; building for common law and equity courts, 300,000*l.*; approaches, foundations, sewerage, warming, ventilating, gas, furniture, fittings, decorations, &c., 180,000*l.*; contingent and incidental charges, 42,000*l.* From this there was to be deducted 523,500*l.*, for the value of ground rent for chambers on the proposed site, for the sale of the various offices of the Masters, Record, and Writ Clerks, Registrars, Accountant-General, value of the present site at Westminster, and of the Roll offices, &c., leaving the ultimate cost of the site and building, 673,574*l.* It was also urged that a favourable opportunity had now occurred for clearing the site of the present insufficient courts, and appropriating it to the completion and improvement of the Houses of Parliament.

TUBULAR DRAINAGE.—Mr. John Francis, surveyor, in a report to the paving, sewering, and highways' committee of the council of the city of Manchester, states that the seventh year's experience in tubular sewerage has served further to strengthen his conviction of the complete adaptation of glazed fire-brick tubes to the purposes of town-drainage, under judicious regulations. The Manchester system of sending through the tubes not only house-sewage, but the general surface drainage of the town, up to the measure of their capacity, he says, is preferable, and has met with a success unknown, to the "separate system," because the tubes are flushed in every shower and storm, and deposit is thereby prevented or removed.

ROADS IN BROMPTON.—Referring to the contemplated improvements about to be effected in the opening of new roads, &c. in the neighbourhood of Brompton, I beg leave to call your attention to the comparative ease and small expense with which an almost straight road, extending from Prince's Gate, Hyde Park, to Chelsea Hospital, could be formed. No person can disprove the usefulness of such a line of road, which would at once connect the river-side with the Park and Kensington Gardens, and bring the much-frequented thoroughfare of King's-road into direct communication with the Kensington-road and Kensington-gore.—R. J.